



Western States Petroleum Association
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Bob Brown

Director, Bay Area Region

October 16, 2017

Mr. Victor Douglas
Bay Area Air Quality Management District,
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San Francisco, CA 94105
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VIA ELECTRONIC MAIL: vdouglas@baaqmd.gov

Re: Comments of the Western States Petroleum Association on Draft Proposed Regulation 11, Rule 18

Dear Mr. Douglas:

The Western States Petroleum Association (WSPA) is a non-profit trade association representing twenty-six companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California, Arizona, Nevada, Oregon, and Washington. Our members in the Bay Area have operations and facilities regulated by the Bay Area Air Quality Management District (District).

This letter constitutes WSPA's comments on Regulation 11, Rule 18 (Rule 11-18), as proposed by the District in revised form on September 15, 2017, and the accompanying Recirculated Draft Environmental Impact Report (DEIR or RDEIR). WSPA also hereby incorporates by reference its prior comments on the proposed Rule 11-18 and prior versions of the DEIR, which were submitted to the District on September 9, 2016, December 2, 2016, and May 8, 2017.

As explained in WSPA's prior comment letters and in greater detail below, WSPA has significant concerns regarding the District's continued segmentation of environmental analysis conducted for a suite of refinery-focused regulations. The California Environmental Quality Act (CEQA) forbids "segmenting" projects into smaller components for purposes of environmental review, which artificially minimizes significant impacts and deprives the public and impacted parties of a full and fair assessment of those impacts. According to the District, Rule 11-18 will have "significant" impacts related to (i) air quality during construction, (ii) greenhouse gas (GHG) emissions, and (iii) ongoing water demand. The District must evaluate these significant impacts alongside those impacts accruing from other rules that compose the District's broader Refinery Project, and its failure to do so constitutes a violation of CEQA.

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WSPA also has significant concerns with the substance of the proposed Rule 11-18. The District continues to propose drafts of Rule 11-18 that establish “Risk Action Levels” that appear arbitrary, are not justified or backed by evidence, may not be technologically achievable, and will have little impact on air quality, the environment, or human health. As explained below and in WSPA’s prior comments, a calculated risk level of 10 per million (10/M) represents a reduction that is *an order of magnitude lower* than the current risk level of 100/M. Moreover, the District’s own analysis demonstrates that 82% of the risk in the bay area related to toxic air contaminants (TACs) is attributable to diesel particulate emissions, while *all* industrial stationary sources of the type regulated by proposed Rule 11-18 account for just 16% of all TAC emissions in the Bay Area. Current background risk from TACs is 690/M. In other words, Rule 11-18 addresses only a very small subset of TAC emissions in the Bay Area, and will do nothing to address the most significant source of risk: diesel emissions from mobile sources. The District has failed to justify its drastic reduction in Risk Action Levels for stationary sources (from 100/M to 10M), or demonstrate that Rule 11-18 is necessary or will be effective to measurably lower the *actual* risk attributable to TAC emissions in the Bay Area.

At the same time, WSPA supports additional flexibility mechanisms incorporated into the latest draft of proposed Rule 11-18 and encourages the District to retain and potentially expand those provisions. Specifically, WSPA supports extending the time to implement a Risk Reduction Plan from three to five years, with a further five year extension in certain instances. WSPA suggests that the District consider a two-phase approach, allowing sufficient time (at least five years, with an extension in certain instances) for all facilities to achieve the initial threshold (as proposed, 25/M) and only then implementing a second Risk Reduction Plan to achieve any second threshold that the District subsequently determines is necessary; that second threshold, in turn, should again provide at least five years for implementation, with extensions as appropriate. WSPA also believes that refineries and other complex facilities will need substantially more time to prepare Risk Reduction Plans; the six months proposed is wholly inadequate given the number of components at issue. WSPA proposes a longer period, of up to three years, to allow facilities to prepare plans that are realistic and actionable.

In addition to these specific issues, WSPA is concerned that Rule 11-18 may interfere with the implementation of AB 617 and regulations being developed by the California Air Resources Board (ARB) to develop a uniform statewide emissions inventory and targeted approach to reducing TACs in identified communities, using cost-effective measures. In light of this ongoing statewide effort, the independent adoption of Rule 11-18 by the District may exceed the District’s authority and interferes with ARB’s efforts to implement AB 617.

These and other issues are discussed more fully below.

I. COMMENTS ON THE RECIRCULATED DEIR AND CEQA

1. The District Is Obligated By CEQA to Evaluate Impacts Arising from Rule 11-18 Jointly And Cumulatively With All Impacts Arising From Other Refinery Project Actions.

Rule 11-18 was conceived, designed, and proposed by the District as one component of the District's broader Petroleum Refinery Emissions Reduction Strategy (Refinery Project). The District's Refinery Project, as implemented through its suite of regulations, is a cohesive project designed by the District with the goal of reducing refinery emissions in the Bay Area by at least 20% within just a few years. CEQA requires the District to consider the whole of the action and evaluate both direct and indirect environmental impacts from the entire project. Public Resources Code, § 21000 *et seq.*¹ CEQA further prohibits "segmenting" projects to create the appearance of a lesser degree of impact. Notwithstanding that obligation, the District has repeatedly segmented the Refinery Project by limiting its analyses to individual rules, while excluding consideration of impacts related to other rules and actions that collectively comprise the Refinery Project.

Rule 11-18 is a component of the Refinery Project, notwithstanding that the rule applies to other stationary sources. Rule 11-18's origin is rooted in the District Board's 2014 resolution to reduce emissions from refineries by 20%, and is repeatedly included by the District in presentations and other public materials describing the District's Refinery Project. *See, e.g.*, Rule Development Workshop presentation, at 8 (March 27-30) (describing Rule 11-18 as a component of the District's broader Refinery Project).²

The DEIR recirculated by the District in August, 2017 addresses only Rule 11-18. That DEIR finds that Rule 11-18 will have significant environmental impacts in at least three areas: (i) air quality during construction, (ii) greenhouse gas (GHG) emissions, and (iii) ongoing water demand related to operation of pollution control technology. The District's Public Hearing notice reiterates these impacts, noting that GHG and water impacts are significant while air quality may experience a significant impact during construction. The District must properly weigh these impacts alongside other localized cumulative impacts arising from the Refinery Project—including recently-adopted Rules 6-5, 8-18, 11-10, 12-15 and 9-14, and additional rules under development—in order to fully inform the public and fulfill CEQA's mandate to evaluate environmental impacts resulting from the "whole of the action." Without a true analysis of the whole project, it is impossible to quantify and understand the magnitude of the environmental impact the District's Refinery Project will have on the public and regulated entities subject to the rules.

For example, many of these rules will require installation of equipment at the refineries, often concurrently. And yet construction related impacts are consistently segmented and viewed in isolation by the District on a one-rule basis. Similarly, operation of that equipment will result in air emissions and may have GHG impacts. But again, the District views those impacts in isolation, rather than as cumulative with other, related measures that collectively comprise the Refinery Project. That kind of artificial minimization undermines CEQA by allowing the District to avoid finding "significant" impacts and designing appropriate mitigation measures for those impacts.

¹ CEQA is further implemented by the CEQA Guidelines, Title 14, California Code of Regulations, § 15000 *et seq.*

² Available at: http://www.baaqmd.gov/~media/dotgov/files/rules/regulation-11-rule-18/documents/20170302_wspres_1118_1216_1301-pdf.pdf?la=en.

The District's segmentation of the Refinery Project also results in a failure to identify adequate mitigation measures. Mitigation measures must be designed to address the cumulative impacts of *all* components of a given project—*i.e.*, the “whole of the action.” Yet, the DEIR discusses mitigation only in the context of Rule 11-18, while omitting any mention of impacts arising from other Refinery Project Rules.

The District cannot piecemeal the analysis of environmental impacts deriving from the Refinery Project to artificially minimize those impacts. Doing so subverts the intent of CEQA and deprives the public and regulated entities a full and fair accounting of impacts arising from the project. It also deprives the public and regulated entities an opportunity to comment upon proposed mitigation measures. To comply with CEQA, the District should undertake a comprehensive EIR that encompasses the entire Refinery Project, not an arbitrary subset of it.

2. The District Should Clarify or Correct Various Aspects of the DEIR.

In addition to the segmentation issue discussed above, the recirculated DEIR contains various statements that are confusing, erroneous, or misleading. WSPA encourages the District to address the following issues:

a. The District Has Changed Its Rationale for Proposing Rule 11-18.

In prior iterations, the District has asserted that Rule 11-18 originates in “Action Item 4” in the District’s “Work Plan for Action Items Related to Accidental Releases from Industrial Facilities.” However, the recirculated DEIR now states that “development of Rule 11-18 was included as Stationary Source Control Measure SS20 in the Air District’s 2017 Clean Air Plan.” The District should clarify the origins and rationale for proposing Rule 11-18. Notably, “Action Item 4” is, according to the District, the genesis for the District’s Petroleum Refinery Emissions Reduction Strategy (Refinery Project), which is a project to reduce refinery emissions by 20% through multiple related measures.³ WSPA and its members have filed lawsuits challenging the District’s adoption of various aspects of the Refinery Project, and have alleged that the District is violating CEQA by segmenting the Refinery Project, as discussed above. The District should address the relationship of “SS20” and “Action Item 4” and include a complete discussion of the origins of Rule 11-18 in the DEIR.

b. The District should Define “Overburdened” and Clarify Section 1.3.1 of the DEIR.

Section 1.3.1 of the DEIR identifies a project objective to “[e]nsure the facilities that impact the most sensitive and overburdened communities reduce their associated health risk in an efficient and expeditious manner.” The term “overburdened” is not defined in the DEIR and is not used in Rule 11-18. The District

³ It is clear that Rule 11-18 remains heavily focused on refineries. When discussing GHG impacts, the DEIR states that “GHGs emitted from petroleum refineries include CO₂, CH₄ and N₂O.” No other industries are mentioned. And when discussing particulate matter, the DEIR states that “many of the stationary source combustion emissions in this table are from petroleum refining operations.” DEIR at 3.1-3. Again, no other industries are mentioned. It is plain that the District continues to focus Rule 11-18 on refineries in the Bay Area – which makes sense given the rule’s genesis as part of the District’s broader Refinery Project.

needs to inform the public and the decision makers how it defines, identifies and quantifies “overburdened communities.” There is no discussion of this issue in the DEIR. In addition, regarding the Health Risk Assessment objectives (to “provide transparency and clarity to the process” and “provide the public opportunity to comment”), the District must articulate what Rule 11-18 would provide regarding transparency and clarity to the process that is not already required by the public rulemaking process and CEQA.

c. The District Does Not Explain or Justify What Constitutes an “Unacceptable Health Risk.”

The District asserts that Rule 11-18 is designed to “ensure that emissions of TACs from existing facilities do not pose an **unacceptable health risk** to people living and working nearby.” DEIR at 2-1. Indeed, the proposed version of Rule 11-18, in Section 101, provides that “[t]he purpose of this rule is to ensure that facilities that emit toxic air contaminants do not pose an unacceptable health risk to nearby residents, workers, or students.” Rule 11-18-101 (emphasis added). Despite the repeated use of the term “unacceptable health risk,” the District fails to identify that term in the DEIR or the rule itself. Without well-defined criteria for what constitutes an “unacceptable health risk,” the public and the decision makers are left guessing at what this means. What is an “unacceptable” health risk? What, by corollary, is an *acceptable* health risk? The rule, the DEIR, and the Staff Report are all silent on these important questions.

The DEIR indicates (Fig. 3.2-1) that current (2014) background risk from TACs is 690/M. The District has failed in the DEIR to address the cumulative impacts of the proposed risk reductions relative to the background risk. Nor has the District justified the risk threshold of 10/M for a single facility relative to the background risk. An analysis of background risk at various locations pre- and post-rule should be conducted. For instance, in a certain location if all facilities affected by the proposed rule reduce risks below 10/M, will the background risk be significantly below 690/M or still near that value? The DEIR does not provide this analysis.

While the District has set “risk action levels” in the proposed rule, nowhere does the District relate those action levels to an “unacceptable health risk.” The District’s use of the term “unacceptable health risk” as the stated basis for proposed Rule 11-18 is so vague as to render the entire rule arbitrary and capricious. Moreover, the District’s “risk action levels” also appear entirely arbitrary and not based on any scientific or technical findings establishing an acceptable or unacceptable health risk. Before proceeding further with a rule will cause significant environmental impacts, the District must provide a reasoned basis for its actions. At a minimum, the District must explain how it defines the term “unacceptable health risk,” the scientific basis for that definition, how it selected the risk action thresholds, and how those thresholds correlate to an “acceptable” health risk.

3. The DEIR’s Analysis of Regulation 11-18’s Impact on Air Quality Is Inadequate.

a. The DEIR fails to recognize all potential applications of thermal oxidizers and carbon adsorption.

In Section 2.5.1.1 and Table 2.5-1, the DEIR explicitly identifies benzene from fugitive emissions as primary risk drivers. However, Table 2.5-3 fails to identify thermal oxidizers and carbon adsorption as potential control technologies for refinery fugitive emissions, but includes them for other facility types (e.g. landfill and sewage treatment plants). Consequently, the DEIR fails to address the additional construction and operational impacts of applying these technologies to refineries.

Although refinery fugitive emissions are mostly dispersed, health risk is a function of both magnitude of emissions and proximity to receptors. Pump stations at refineries near and upwind of receptors may be risk drivers, but the DEIR fails to identify the potential installation and operation of thermal oxidizers at refineries in response to requirements imposed by Rule 11-18. For example, Chevron currently has permits for thermal oxidizers and carbon adsorption on one of its pump stations. This omission calls into question whether the DEIR has adequately reviewed the applicability of other control technologies to other facilities and whether the DEIR understates the environmental impacts for at least air quality and hydrology.

- b. The DEIR fails to provide the basis for significantly decreasing the frequency of regenerations for applications of carbon adsorption.*

In the District's Draft Environmental Impact Report for the Bay Area Air Quality Management District, Regulation 11-18: Toxic Risk Reduction Rule, Regulation 12-16: Petroleum Refining Emissions Limits and Risk Thresholds, March 2017 (March 2017 DEIR), the frequency of regenerations for carbon adsorption vessels was 4 per day (1,460 per year), which was the assumption used in a South Coast Air Quality Management District (SCAQMD) Final Environmental Assessment. However, the District's RDEIR drastically *decreases* the frequency of regenerations for applications of carbon adsorption from 1,460 per year *to 12 per year*, a 99% decrease. This lower frequency has no reference and is not used in SCAQMD EIR, but if the frequency was not changed, the potential overlapping emission for NOx under the worse-case annual operational emission or multiple facilities would be at the significant threshold of 10 tons per year. The DEIR needs to provide a basis for the lower frequency.

4. The DEIR's Impact Analysis of Alternatives is Inadequate and Fails To Provide the Basis For the Environmental Impacts of Alternative 2.

While the DEIR discusses the environmental impacts of Alternative 2 in Section 4.3, it fails to disclose the basis of *how* those impacts were determined. In Table 4-1, the DEIR identifies that the quantity of every control technology decreases under Alternative 2, except for refinery wet gas scrubbers. Refinery wet gas scrubbers are significant contributors to construction air emission and water demand. The DEIR gives no explanation for why the number of refinery wet gas scrubbers remains unchanged under Alternative 2 despite a significantly higher risk action level. This is in stark contrast to March 2017 DEIR, where the same project alternative determined that "the additional water use and wastewater discharged associated with implementation of Rule 11-18 would be greatly diminished." The District should explain how it determined, in the RDEIR, that three refinery wet gas scrubbers would still need to be installed to control health risk to the higher risk action levels of Alternative 2.

II. SUBSTANTIVE LEGAL & TECHNICAL COMMENTS

The California Health & Safety Code requires the District to make six statutory findings before amending a rule: necessity; authority; clarity; consistency; nonduplication; and reference. Cal. Health & Safety Code § 40727. As Rule 11-18 is currently drafted, the District will not be able to meet these statutory requirements, particularly with respect to the elements of necessity, consistency, and clarity as explained below. In addition to these statutory requirements, the District is barred from adopting rules that are arbitrary, capricious, or in excess of the District's authority. As currently proposed, Rule 11-18 runs afoul of many of these requirements and suffers a number of technical issues that the District must correct.

1. The District Has Not Demonstrated That Rule 11-18 Is Necessary, and Its Decision to Deviate from a 100/M Risk Threshold is Arbitrary and Capricious.

The District has not demonstrated that Rule 11-18 is a necessary, justified, or an effective measure to reduce risks related to TAC emissions in the Bay Area. Nor has the District explained its sudden departure from a residual risk threshold previously employed by the District, endorsed by the U.S. Environmental Protection Agency (EPA), and upheld by the courts for over 30 years. These shortcomings violate H&S Code § 40727, render Rule 11-18 arbitrary and capricious, and would result in a rule that has little practical benefit while imposing significant costs on a range of businesses in the Bay Area.

The stated purpose of draft Rule 11-18 is to “ensure that facilities that emit toxic air contaminants do not pose an unacceptable health risk to nearby residents, workers, or students.” Rule 11-18 § 11-18-101. As proposed, Rule 11-18 would require all covered facilities, including non-refinery entities, with a calculated risk level of 10 per million (10/M) or greater to develop a Risk Reduction Plan to implement controls that will reduce the facility’s risk level to below that level. Facilities with a calculated risk level of 25 per million (25/M) will need to take action even sooner. But the District has failed to explain why those numbers are the appropriate risk thresholds, especially since they represent a severe departure from the District’s prior 100 per million (100/M) threshold—a threshold that has been routinely employed both by other air districts and EPA. While an agency may change its mind, when it departs from long-standing policy “a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy” and an “unexplained inconsistency” with prior policy “is a reason for holding [a regulation] to be an arbitrary and capricious.” *Encino Motorcars, LLC v. Navarro*, 136 S.Ct. 2117, 2126 (2016) (internal notations and citations omitted). Here, the District, like many other agencies, has for years consistently considered 100/M to pose an “acceptable” risk level. Nowhere has the District provided any explanation, such as newly-discovered data, demonstrating why it is now necessary to reduce this longstanding risk threshold by an order of magnitude. On its face, the District’s decision to lower residual risk thresholds, without providing a “reasoned explanation” for that decision, appears arbitrary and capricious.

California’s “Hot Spots” program clearly requires the District to reduce “significant” risks “below the significant risk level,” and it leaves it to the District to define that threshold. *See* H&S Code § 44391. This grant of authority is not unbounded, however: by law, the District still must demonstrate that its actions are necessary; it cannot arbitrarily establish standards that are not justified by any measurable outcome. To accomplish this, the District must provide a reasoned explanation for its proposal to adopt such a dramatic reduction in the degree of risk that is deemed “significant.”

The District’s Staff Report states that the risk action levels in Rule 11-18 are based on the OEHHA’s 2015 Health Risk Guidelines and “reflect the most health protective levels achievable and correspond to the health risk levels that the Air District uses for the existing ‘Hot Spots’ program.” Yet the District provides no citation for this assertion and OEHHA itself has not, to WSPA’s knowledge, specifically endorsed the 25/M or 10/M thresholds as “acceptable” residual risk thresholds. The District’s proposal also appears to contradict the conclusion reached by the San Joaquin Valley Air District, which retained the 100/M threshold in its own response to the same OEHHA 2015 Health Risk Guidelines. Moreover, OEHHA notes

that the methodologies contained in the 2015 Health Risk Assessments Guidelines may result in conservatively *high* estimates of risk (because they take the most sensitive populations into consideration).⁴

A data-driven analysis, solidly grounded in both fact and scientific theory, is especially critical here, where the available information suggests that Rule 11-18 will in fact result in only minimal “real” risk reduction. According to the District’s own analysis:

- Diesel particulate emissions are the cause of 82% of risk related to TAC emissions in Bay Area.
- All industrial facilities account for only 16% of TAC emissions, with refineries representing a smaller subset of that.

In sum, Rule 11-18 specifically targets only a small subset of industrial facilities; and all industrial facilities combined are responsible for only 1/6th of TAC emissions in the Bay Area. The District should carefully consider the necessity and appropriateness of imposing such stringent and costly new obligations solely on one particular target that contributes significantly less than 1/6th of area-wide TAC emissions, while failing to address the real public health risk from the source of the other 5/6th of TAC emissions: diesel particulate matter largely emitted from mobile sources.

Given the protective nature of the existing standards, and the lack of any information suggesting that these standards are not sufficiently protective, the District has not demonstrated that reducing in the residual risk threshold by an entire order of magnitude is necessary to fulfill the District’s statutory mandate or protect the public health. And even if such a drastic reduction were necessary to protect public health, Rule 11-18 will not accomplish that goal given the very minor contribution from refineries to overall TAC risk in the Bay Area.

Other agencies that have addressed similar issues have concluded that 100/M is sufficiently protective, and courts have consistently upheld those determinations. For example, the Clean Air Act requires the EPA to establish National Emission Standards for Hazardous Air Pollutants (NESHAP) to “protect human health with an ample margin of safety”. CAA § 112(d)(4). EPA accomplishes this through a two-step framework: first, EPA determines an appropriate level of risk taking into account *only* public health factors; and second, the Agency sets an emission standard that provides an ample margin of safety below this risk level. Since the mid-1970s, EPA has defined “ample margin of safety” as 100/M cancer risk, and that approach has been consistently upheld as reasonable. *See, e.g., Natural Resources Defense Council, Inc. v. U.S.E.P.A.*, 824 F.2d 1146 (D.C. Cir. 1987). Indeed, Congress expressly retained this standard when it substantially revised Section 112 in 1990, and the D.C. Circuit has consistently rejected arguments that the standard should be lowered:

EPA set forth its interpretation of “ample margin of safety,” as that term was used in the 1970 version of the Clean Air Act. It said that the “ample margin” was met if as many

⁴ OEHHA’s Guidance Manual for Preparation of HRAs states that “...there is a great deal of uncertainty associated with the process of risk assessment....The assumptions used in these guidelines are designed to err on the side of health protection in order to avoid underestimation of risk to the public....Risk estimates generated by an HRA should not be interpreted as the expected rates of disease in the exposed population but rather as estimate of potential for disease, based on current knowledge and a number of assumptions....”

people as possible faced excess lifetime cancer risks no greater than one-in-one million, and that no person faced a risk greater than 100-in-one million (one-in-ten thousand). 54 Fed. Reg. at 38,044-45. In other words, *the Benzene standard established a maximum excess risk of 100-in-one million*, while adopting the one-in-one million standard as an aspirational goal. *This standard, incorporated into the amended version of the Clean Air Act, undermines petitioners' assertion that EPA must reduce residual risks to one-in-one million for all sources that emit carcinogenic hazardous air pollutants.*

Natural Resources Defense Council v. E.P.A., 529 F.3d 1077, 1080 (D.C. Cir. 2008) (emphases added); *see also National Association for Surface Finishing v. E.P.A.*, 795 F.3d 1, 5 (D.C. Cir. 2015) (upholding NESHAP for hexavalent chromium, observing that the standards were based on “whether the residual health risk is ‘acceptable,’ **a threshold EPA generally interprets as carrying cancer incidence no greater than 100 in one million**”) (emphasis added).

Petroleum refineries are already subject to MACT standards under 40 CFR part 63, subparts CC and UUU. As explained above, those standards must—under the Clean Air Act—protect human health with an “ample margin of safety.” In revising the MACT standards applicable to refineries, EPA recently explained that:

The results of our residual risk review for the Petroleum Refinery source categories . . . included assessment of chronic and acute inhalation risk, as well as multipathway and environmental risk, to inform our decisions regarding acceptability and ample margin of safety. ***The results indicated that both the actual and allowable inhalation cancer risks to the individual most exposed are no greater than approximately 100-in-1 million***, which is the presumptive limit of acceptability. In addition, the maximum chronic non-cancer target organ-specific hazard index (TOSHI) due to inhalation exposures was less than 1. The evaluation of acute non-cancer risks, which was conservative, showed acute risks below a level of concern.

80 Fed. Reg. 75178, at 75186-7 (emphasis added). Following comment and review of its risk analysis, EPA conducted further analysis and solicited comments on its residual risk review for refineries. That process “provided evidence that the quantity of HAP emitted at these specific facilities is lower than considered in the risk modeling for the proposed rule.” *Id.* at 75187. Based on this, EPA specifically concluded that “the risk remaining after promulgation of the [refinery] NESHAP is acceptable.” *Id.* at 75188.

The District is of course not bound to reach the same conclusion as EPA. Nonetheless, given EPA’s significant expertise in assessing risk, and the many court decisions that have consistently held that EPA’s 100/M standard is reasonable, it would be prudent for the District to consider EPA’s analyses when evaluating the appropriateness of its own risk thresholds. The District should employ a risk threshold of 100/m as a presumptive standard and guide, departing from that standard only when demonstrably required to address a well assessed and documented health risk. Here, there is no evidence that such a risk exists, or that further regulating refineries could mitigate any such risk.

In short, MACT standards imposed by EPA—and currently implemented by the District through Regulation 2, Rule 2 (Rule 2-2)—are already adequate to protect human health, with an “ample” margin of safety. For this and other reasons, the 100/M standard has long been employed by EPA and air districts in California.

Indeed, other air districts with worse air quality (*e.g.*, more criteria pollutants in non-attainment), including the South Coast and San Joaquin Valley Air Districts, have determined that a 100/M residual risk threshold is protective. Notably, under AB 2588, the San Joaquin Valley Air District established and recently affirmed a 100/M residual threshold for cancer risk and a threshold of 5 for non-cancer acute or chronic risk.⁵

There is substantial overlap between HAPs regulated by the federal NESHAP program and the District's Regulation 2, Rule 5 (Rule 2-5), which addresses TACs and provides the list of substances that would be regulated under Rule 11-18.⁶ According to the District, its ongoing regulation of TACs under Rule 2-5, along with its implementation of MACT standards under Rule 2-2, have resulted in a *decline* in lifetime risk of 87% since 1990. District Staff Report, at 26 (October 2016). Refineries and other stationary sources in the Bay Area are already heavily regulated and subject to Rule 2-2 and Rule 2-5, as well as EPA's MACT standards. Those rules, in turn, incorporate a residual risk that is already protective of human health by an "ample" margin of safety.

The District's decision to include in proposed Rule 11-18 risk thresholds of 10/M and 25/M, as well as its decision to set chronic and acute hazard indices at 1.0 and 2.5, is an unjustified, unexplained, and arbitrary departure from long-standing risk thresholds employed by the District, EPA, and other air districts in California. There is no evidence that the 10/M or 25/M thresholds proposed by the District are achievable, and no evidence that—even if achieved—they would materially alter the *actual* risk profile in the Bay Area given that the vast majority of TAC emissions arise from mobile sources and diesel pollution. Moreover, there is no evidence that a lower threshold of 10/M is necessary to protect public health: EPA has repeatedly established MACT standards for refineries with an "ample margin of safety" that are based on a residual risk threshold of 100/M. If standards based on a 100/M threshold are already adequate to protect the public with an "ample margin of safety," then standards based on a lower threshold, such as those contained in Rule 11-18 are, by definition, unnecessary to protect against "significant" risks.⁷ This is especially true given the relatively minor contribution of refineries to any remaining residual risk in the Bay Area.

The District should establish a risk reduction threshold in Rule 11-18 of 100/M. If the District does proceed with a lower threshold, WSPA suggests that the District should consider a risk reduction threshold of 25/M or higher, assess the feasibility and cost-effectiveness of a 25/M threshold as compared to a 100/M

⁵ San Joaquin Valley Air District, Final Staff Report, *Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document*, at 5, 19 (May 28, 2015), available at: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>.

⁶ While the lists are not identical, the listed substances relevant to refinery emissions are similar. And while the federal program does not include diesel PM, refineries are not a significant source of diesel PM emissions.

⁷ The achievability of reducing an existing facility's TAC emissions to below the 25/M or 10/M cancer risk level depends on several factors, such as the District's definition of "source," its emission calculation methods, its dispersion models, and its risk calculation models. Before the District adopts risk thresholds, it should consider the actual risk drivers in the Bay Area (such as diesel pollution) and provide a thorough assessment of what reductions at stationary sources are scientifically, technologically, and economically achievable, justified, and necessary.

threshold, and further assess the incremental costs and benefits of lowering the threshold from 25/M to 10/M.

2. The District's Proposed HRA Calculation Methodology Lacks Clarity and Will Result in Artificially Inflated Results.

The applicability of draft Rule 11-18 depends entirely on the District's calculation of a facility's health risk. Yet apart from the requirement in §11-18-401 for facilities to submit "any information necessary to complete an HRA of the facility" at the District's request, the draft rule does not describe the procedures, or limits, to the District's determination of applicability. Instead, the District proposes to conduct Health Risk Assessments (HRAs) pursuant to Rule 2-5-603, which in turn references the District's Air Toxics NSR Program Health Risk Assessment Guidelines. Those Guidelines in turn cross-reference OEHHA's 2015 Health Risk Assessment Guidelines. And OEHHA's Guidelines contain numerous appendices and cross-reference yet more documents. On its face, Rule 11-18 does not describe how the District will conduct HRAs with sufficient clarity to allow regulated entities to replicate those calculations.

The Staff Report explains that the District will use emissions inventory data to screen for facilities with a cancer priority score of ten or greater or a non-cancer priority score of one or greater, and then conduct HRAs for those facilities in accordance with the most recent versions of OEHHA's HRA Guidelines, AB 2588, and the ARB/CAPCOA Risk Management Guidelines. In addition, the Staff Report suggests that facilities will be consulted to validate the HRA model and site-specific factors. None of this is apparent from the language of the draft rule.

The District must clarify that (i) the HRAs to be prepared by the District will be done consistently with the OEHHA 2015 Health Risk Assessment Guidelines, and (ii) facilities will be provided with an opportunity to review and comment on both the inputs to and results of HRAs prior to being required to submit Risk Reduction Plans. WSPA also requests that data in Table 2-5-1 of Rule 2-5 be expressly referenced in Rule 11-18. In addition, WSPA requests that the draft rule incorporate an HRA review process that provides sufficient time for source testing and ambient air testing, and that a Hearing Board appeal process be added to the rule's provisions, much like with permit determinations. Absent input from facilities, the District may incorrectly characterize facility emissions and/or health risk, which could lead to the District requiring facilities to install control equipment on sources that testing may show do not pose a health risk.

Equally important, it appears the District intends to conduct HRAs using outdated emissions factors that are decades old and based on emissions from refineries outside the Bay Area. The District has not justified its continued reliance on these inflated emissions factors, which appear arbitrarily selected and do not track real-world refinery emissions. Substantive current data exists, and the District should use this data to craft its HRAs. Specifically, the District and Bay Area refineries are currently engaged in a study that will better describe emissions from certain refinery operations. Initial results indicate that real-world emissions are similar to those described in emissions factors created by the California Air Pollution Control Officers Association (CAPCOA). The Hot Spots program requires ARB and the District "to ensure that, in collecting data to be used for emissions inventories, actual measurement is utilized whenever necessary to verify the accuracy of emission estimates, to the extent technologically feasible." H&S Code § 44342(i). That is the case here: "actual measurement" at Bay Area refineries has verified the CAPCOA emissions factors. The District has endorsed CAPCOA's Risk Management Guidance for Stationary Sources of Air Toxics, and should clarify that HRAs conducted pursuant to Rule 11-18 will employ CAPCOA emissions

factors, at least until results from the Bay Area refinery study are available, at which time real-world data may be available to create more accurate and realistic HRAs for Bay Area refineries.

3. The District Should Retain Exemptions to Rule 11-18 and Further Exempt Facilities Already Covered by Similar Regulations.

The version of Rule 11-18 proposed in September, 2017, exempts “Retail Gasoline Dispensing Facilities.” WSPA encourages the District to retain this exemption, both for practical reasons and to maintain consistency with Rule 2-5. In prior comments, WSPA suggested that the District should exempt sources from Rule 11-18 that were already subject to or listed as exempt from Rule 2-5, including certain new and modified internal combustion engines smaller than 50 hp and retail gasoline facilities. The District acted correctly when it exempted emergency diesel generators and retail gasoline facilities from the version of Rule 11-18 proposed in September, 2017 and WSPA encourages the District to retain those exemptions to maintain consistency and non-duplication with other rules. Retail gasoline dispensing facilities are already subject to BAAQMD Rule 8-7, which requires installation of the same type of pollution control measures contemplated by Rule 11-18. Regulating these facilities under Rule 11-18 would simply duplicate the effect of Rule 8-7, an outcome that would have no practical health or air quality benefit while imposing substantial burdens on small facilities in the Bay Area.

In addition, draft Rule 11-18 is unlikely to provide any emissions reductions for certain existing source types that are already implementing analogous Best Available Retrofit Control Technology (TBARCT) controls for toxics. WSPA reiterates its prior request that the District should exempt any facilities from Rule 11-18 that are already subject to requirements that reflect TBARCT. Otherwise, Rule 11-18 will simply duplicate existing regulations, adding cost while creating little to no additional environmental or health benefits.

4. Various Provisions of Proposed Rule 11-18 Exceed the District’s Authority and/or Lack the Clarity Required by the H&S Code.

Several of the provisions of proposed Rule 11-18 either exceed the District’s authority, are not sufficiently clear to be understood, or both.

a. *Cargo Carrier Emissions Requirements Lack Clarity and Exceed District Authority.*

The District has no authority to regulate cargo carriers. The District should clarify that the emissions from cargo carriers (e.g., ships and trains) are excluded from draft Rule 11-18.⁸ As discussed in prior WSPA comments on the District’s Refinery Strategy project rules, cargo carriers are owned and operated by other companies. WSPA’s members cannot control their operations, do not have access to cargo carrier emissions data, and cannot compel cargo carriers to provide that information. Furthermore, as currently drafted, Section 11-18-204 of Rule 11-18 specifically exempts cargo carriers from TBARCT requirements. As a result, including cargo carrier emissions in the emissions inventories of adjacent facilities may potentially trigger HRA and TBARCT requirements for the adjacent facility, even though the facility does not own or

⁸ Similarly, the District should clarify that emissions from all mobile sources are excluded from draft Rule 11-18. WSPA members have received conflicting information from meetings with District staff on whether health risk from mobile sources are subject to regulation under Regulation 11-18.

control the source of those emissions, and even though those sources themselves *are exempt* from the control requirements. If the District seeks to regulate emissions from cargo carriers, it should work with ARB, to the extent that ARB has authority to act. If the District is concerned about diesel particulate emissions from cargo carriers, note that ARB is in the process of writing Airborne Toxic Control Measures (ATCM) that will reduce diesel particulate matter from cargo carriers. Any direct regulation of cargo carriers by the District—including imposition of reporting or other cargo carrier requirements on refineries—exceeds the District’s authority, is preempted by federal law, and should not be included in Rule 11-18.

b. Toxic Emissions Inventories Exceed District Authority and Lack Clarity.

The Staff Report explains that the District will use the annual toxic emissions inventories reported to the District to conduct site-specific HRAs for sources that emit toxic compounds. Section 11-18-404.3.3, in turn, requires the Risk Reduction Plan to include a source characterization that includes “*summary data from the applicable APCO-approved air toxic emission inventory.*” Recently, the Legislature provided for state-wide emissions inventories when it enacted AB 617. The law requires ARB “in consultation with districts” to “establish a uniform statewide system of annual reporting of emissions of criteria pollutants and toxic air contaminants for a stationary source.” The law further requires annual reporting to ARB “using the uniform statewide system of annual reporting.” The District’s reliance on an independent, parallel emissions inventory in Rule 11-18 is not authorized by AB 617 and may interfere with the orderly implementation of the uniform statewide system” required by AB 617. Rule 11-18 also will create burdensome, duplicative requirements and the potential for inconsistent results. In enacting AB 617, the Legislature clearly indicated that it desired to create a uniform statewide system, not a patchwork of emissions inventories managed at the district level. The emissions inventory requirements that the proposed Rule 11-18 would impose ignores the purpose and objectives of AB 617 and are beyond the District’s authority to adopt.

Even if the emissions inventory components of Rule 11-18 were lawful, as currently proposed Rule 11-18 lacks clarity with respect to the emissions inventory component. At a minimum, to help ensure consistency in emission inventory and health risk assessment methodology across facilities, the District should align Rule 11-18 with AB 617 standards developed by ARB. The District should delay its rulemaking until ARB adopts such standards to allow for consistency with the “uniform statewide system.”⁹

c. Summary Data.

WSPA suggests removing from Rule 11-18 the requirement in Section 11-18-403.3.2 to include summary data from the HRA in the Risk Reduction Plan. As the HRA is to be prepared by the District, a facility would need to request the information from the District (the source of the HRA), and then submit the information back to the District in the Plan. Since the District already has the summary HRA information, this process adds unnecessary complexity and cost to the process of creating Risk Reduction Plans.

⁹ In addition, the District should only calculate emissions for TACs that detectable and/or measurable. The District should not estimate emissions for TACs using emission factors or other estimation methodologies that are based on non-detects during source testing.

d. Definition cross-references.

The definitions in Rule 11-18 reference sources in other rules. If a definition changes in a source rule, it is unclear whether the definition in Rule 11-18 would change automatically. A source rule could potentially change without thorough consideration of effects on Rule 11-18. To satisfy the clarity requirement of the H&S Code, and to assure the integrity of Rule 11-18, the definitions in Rule 11-18 should stand alone and not depend on citations to other rules.

e. The District should clarify and revise the definition of TBARCT.

WSPA requests that the District revise the definition of TBARCT to ensure that costs, non-air-quality impacts, and energy requirements are considered. As currently written, the definition of TBARCT outlines four methods by which TBARCT may be determined. One option, identified in Section 11-18-204.3, expressly requires the consideration of costs, non-air-quality health and environmental impacts, and energy requirements. The other three methods do not. For example, the method identified by Section 11-18-204.1 would require use of the most effective technology that has ever been used successfully on that type of equipment, even if site-specific considerations make that technology economically infeasible, and even if the technology would have potentially damaging non-air impacts in an ecologically sensitive area. The District should revise the definition of TBARCT to ensure that all appropriate factors are considered in making the determination, including costs.

Section 11-18-204.4 also should be revised to clarify that the District is referring to the controls identified in a MACT standard or an ATCM are those for *existing* sources, not new sources. EPA's MACT standards for new and existing sources are based on entirely different data sets and impose different levels of control; the fact that EPA has concluded that a specific emissions limit is achievable for a new source that is designed to use a specific technology does not prove that an existing source can be retrofitted to achieve that same level of control (indeed, the persistence of less-stringent MACT limits for existing sources demonstrates that such retrofits are typically *not* possible).

At a broader level, the breadth and vagueness of the definition of TBARCT, and the lack of clarity regarding the District's ability to consider costs in this determination, makes it nearly impossible for the District to properly evaluate the costs associated with Rule 11-18, as currently drafted. Further, there is no indication of what the District may consider to be "technically infeasible."¹⁰ Without a much more clear explanation of the parameters of the proposed requirements, WSPA and its members will not be provided a reasonable opportunity to submit data and analysis supporting or opposing the economic and technical feasibility of the draft rule. The District should improve and clarify these TBARCT provisions to avoid adopting a rule that is vague, unworkable, and potentially inconsistent with other District, state, and federal regulations.

f. The Term "Significant Impact" is undefined.

Section 11-18-406 requires updates to Risk Reduction Plans if "health risk posed by a facility . . . would *significantly impact* health risks to exposed persons" (emphasis added). It is unclear whether "*significantly impact*" is a subjective term, or whether the District is referring to the "significant risk thresholds"

¹⁰ The definition of an "unreasonable economic burden" also lacks clarity and fails to consider real-world variations in refinery profits. It should be revised to incorporate an averaging period to account for those fluctuations.

elsewhere in Rule 11-18. The District should revise this language to clarify that the obligation to update the Risk Reduction plan is triggered only if new information (i) causes a facility to exceed the threshold for preparing such a plan in the first instance, or (ii) increases the risk associated with the source by more than the significant risk threshold. The District also should consider, in its cost-effectiveness calculations, the significant costs associated with updating Risk Reduction Plans and to implement new emission reduction technologies as a result of those updates. Failure to do so violates the H&S Code requirements to assess and document socioeconomic impacts associated with District rulemakings. *See* H&S Code § 40728.5.

5. The District Should Retain or Enlarge the Extended Timelines Contained in the September, 2017 Version of Proposed Rule 11-18 And Consider Additional Flexibility Mechanisms.

a. HRA Information

Section 11-18-401 requires facilities to submit to the District “any information necessary to complete an HRA of the facility” within 60 days of a request. Although previously-proposed versions of the rule contained a 30-day deadline, even 60 days is an overly ambitious schedule, given the level of effort needed to obtain the latest emissions information, building dimensions, and other similar information. In order to assure adequate time to collect and submit substantive, validated information, WSPA encourages the District to retain the 60-day timeframe for HRA data submissions and consider further extending that timeframe to at least 90 days. At a minimum, this provision should be amended to allow for extensions of time in appropriate circumstances.

b. Risk Reduction Plans

In Section 11-18-403, the District has proposed a 180-day timeframe for submission of a Risk Reduction Plan following receipt by a regulated entity of the District’s HRA. This timeframe does not provide facilities with sufficient time to review the accuracy of the District’s HRA, or sufficient time to prepare a Risk Reduction Plan. Such a plan, for a refinery, may be quite complex and implicate numerous refinery operations. It may also require capital planning, engineering, and preliminary design work to determine the most appropriate set of measures that are feasible to achieve the targeted risk reductions. This is especially true given the District’s very low proposed final residual risk threshold of 10/M. The time needed to evaluate all potential risk reduction measures for a large, complex facility, including the need to re-run HRAs, analyze impacts, and conduct feasibility analyses for engineering requirements, will require considerably more time than 180 days. WSPA encourages the District to extend this timeframe to three years year for refineries regulated by Rule 11-18 and suggests that it may be appropriate to have a similar deadline for all complex facilities regulated by the rule (such as refineries) and a shorter timeframe for less-complex facilities.

c. Risk Reduction Plan Implementation

WSPA supports the District’s decision, in Section 11-18-404.6, to extend to five years the time to implement a Risk Reduction Plan and allow an additional five-year period to implement a Risk Reduction plan to “address a technical feasibility issue” or to “avoid placing unreasonable economic burden on the facility operator.” The District’s actions are consistent with H&S Code § 44391, which establishes parameters for risk reduction plans. As explained in prior comments, the design and installation of TBARCT is a time-consuming process, and WSPA appreciates that the District appears to recognize that important feasibility issue. However, in some cases, even five years may not be adequate to design and

install TBARCT, and WSPA asks the District to consider an additional “extension” option that allows a refinery to either extend the timeframe past the initial deadline by five years or to install TBARCT (or other equipment) during the next scheduled shut-down. This will help avoid the unnecessary emissions caused by “extra” startup/shutdown operations while allowing refineries to better manage and plan for actions required by a Risk Reduction Plan.

In addition to the question of timing, WSPA believes that achieving the very-low (and unprecedented) residual risk threshold of 10/M may, in some instances, prove impossible or not cost-effective by any rational measure. As the District is aware, Regulation 2-5 already imposes Best Available Control Technology for Toxics requirements on refineries that, among other things, are based on the “most stringent” MACT imposed by EPA on the source. As discussed above, MACT standards are already designed to be fully protective of human health and the environment with an “ample margin of safety.” In some cases, even a complete application of TBARCT at a source will not reduce residual risk to the 25/M and 10/M thresholds proposed by the District. But the District nonetheless proposes requirements in Rule 11-18 that may require the installation of TBARCT even if such installation will not achieve the risk thresholds established by Rule 11-18. Moreover, the proposed Section 11-18-404.6.3 provides that even if a facility is unable to reduce emissions below the risk threshold, it must demonstrate that reducing risk below the 10/M threshold is “not feasible” *and must also install TBARCT on all significant sources*. This provision adds no clarity on how the District will interpret “feasible,” and fails to account for scenarios where the installation of TBARCT will have little or no material impact on risk. Moreover, a facility may need to consider all sources, not just significant ones, when determining what is “feasible.” This framework may result in burdensome requirements to impose TBARCT when doing so has little or no environmental benefit—an issue not squarely addressed by the District in the proposed rule, DEIR, or Staff Report.

Setting an unachievable—and unnecessarily low—goal is unreasonable, arbitrary, not cost-effective, and not necessary to protect health. WSPA encourages the District to conduct a comprehensive cost-benefit analysis that adequately evaluates incremental costs and benefits of emissions reductions achieved at 100/M, 25/M, and 10/M residual risk thresholds and to place those emissions reductions in the broader context of air quality in the Bay Area. WSPA also encourages the District to create a pathway in Rule 11-18 that allows the submission of a Risk Reduction Plan that does *not* require the installation of TBARCT when such an installation would not result in a significant, measurable improvement in residual risk. Requiring further TBARCT installations to achieve incrementally minor benefits, yet at great cost, makes no sense in an air basin where stationary sources account for a small percentage of TAC emissions.

6. Rule 11-18 is Premature and Interferes with the Orderly Implementation of AB 617.

In mid-2017, the California Legislature passed AB 617, which was signed into law on July 26, 2017. AB 617 addresses the subject of Rule 11-18: reduction of TAC emissions. In particular, the law requires ARB to establish a state-wide community air monitoring system to identify “air pollutant concentrations in the ambient air at or near sensitive receptor locations and in disadvantaged communities.” The law also requires ARB, by October 1, 2018, to develop a “statewide strategy to reduce emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden.” Following development of that plan, ARB is then obligated to work with Districts to develop “community emissions reduction programs,” which must be “consistent with the state strategy and include emissions reduction targets, specific reduction measures, a schedule for the implementation of measures, and an enforcement plan.” But those “community emissions reduction programs” can only be developed *after*

ARB's initial assessment, and must be approved by ARB before going into effect. In addition, AB 617 requires that these plans employ "cost-effective" emissions reduction measures.

The District acknowledges the significant overlap of Rule 11-18 and AB 617, noting that "[m]any of the facilities likely to be affected [by Rule 11-18] are located in Bay Area communities that face a variety of public health challenges" and that Rule 11-18 would help to "address some of the Air District's potential obligations under Assembly Bill 617." The District attempts to sidestep this issue in its Staff Report, first admitting that AB 617 requires "the Air Resources Board to select communities with high exposure burdens, with the air districts where the communities are located then obligated to prepare community emissions reduction programs for toxics and criteria pollutants." But then the District asserts that Rule 11-18 will "help" this process because "[t]he Air District would identify significant sources of TAC emissions through the use of prioritization scores, which are rough approximations of risk based on preliminary data. The Air District would then conduct an HRA for any facility with a prioritization score that the Air District considers significant." But the District has it backwards: under AB 617, it is ARB—and not the District—that is charged with identifying communities with high exposure burdens and approving risk reduction plans. Rule 11-18 would sidestep ARB and the process adopted by the Legislature in AB 617.

By proposing Rule 11-18 at this early stage, the District has jumped the gun. As the District notes, its obligations under AB 617 are at this stage merely "potential" and inchoate. With ARB developing a uniform emissions inventory for TACs, identifying communities where emissions reductions are required, then working with districts to achieve those reductions, the District's independent effort to further regulate TACs (which are already regulated by Rule 2 and other regulations) is premature and exceeds the District's authority. Rather than proceed with a rulemaking that is inconsistent with many of the provisions of AB 617—and that may ultimately need to be scrapped or substantially revised to comply with ARB's statewide plan—the District should postpone or reconsider Rule 11-18 in order to better align the District's efforts with those of ARB as it works to implement AB 617 in the near future.

III. CONCLUSION

The District should prepare an EIR for proposed Rule 11-18 that evaluates its impacts, and related mitigation measures, cumulatively with other actions taken by the District as part of its Refinery Project. The District has not demonstrated the necessity of Rule 11-18, and as currently proposed the rule contains many provisions that lack clarity, exceed District authority, and interfere with state law. Because Rule 11-18 is premature, based on unjustified residual risk thresholds, and will address the underlying driver of TAC risk in the Bay Area, the District should postpone the adoption of Rule 11-18 unless and until it is revised to address the concerns raised herein.

We appreciate your consideration of WSPA's comments, and look forward to your responses.

Sincerely,

